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Empirical Statistical Model of Climatic Changes in the Volga Region

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Abstract

© Published under licence by IOP Publishing Ltd. Climatic changes in the Volga Federal Region from 1928 to 2017 are examined. CRU data, meteorological stations, and reanalysis ERA-Interim data are used. An estimation of global factors in the variability of air temperature in the region is made. For the first time, for the VFR, an empirical-statistical model is constructed for vertical distributions (up to 64 km) of air temperature, average standard deviation of temperature, linear trend slope coefficient, and low frequency temperature component. The effect of Arctic Oscillation on temperature changes near the Earth's surface and in the layer of 7-3 hPa in the stratosphere are evaluated.

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